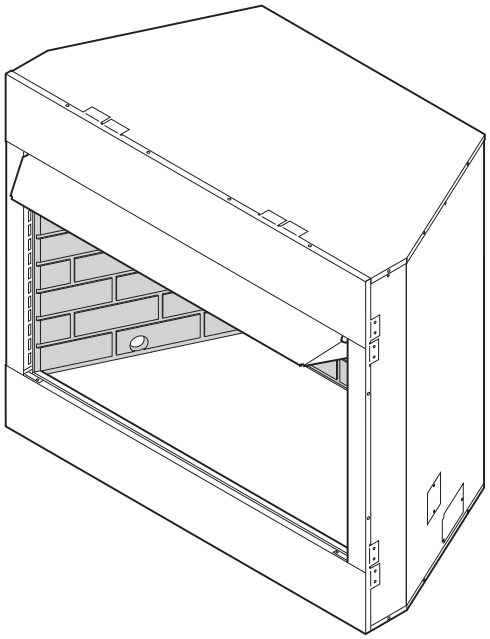
Monessen

UNVENTED VENT-FREE FIREBOXES

INSTALLATION AND OPERATING INSTRUCTIONS



MODELS:

BUF400

BUF500

For use with a listed gas-fired unvented decorative room heater not to exceed 40,000 BTU/hr. Do Not Build a Wood Fire.

Carefully review the instructions supplied with the decorative type unvented room heater for the minimum fireplace size requirement.

DO NOT INSTALL AN APPLIANCE IN THIS FIREBOX UNLESS THIS FIREBOX MEETS THE MINIMUM DIMENSIONS REQUIRED FOR THE INSTALLATION.

DESIGN CERTIFIED

MADE IN U.S.A.

WARNINGS

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**
- **WHAT TO DO IF YOU SMELL GAS**
  - **Do not try to light any appliance.**
  - **Do not touch any electrical switch; do not use any phone in your building.**
  - **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
  - **If you cannot reach your gas supplier, call the fire department.**
- **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

READ AND SAVE THESE INSTRUCTIONS

CONTENTS

Important Safety Information 3

Product Features 5
- Before You Start 5

General Installation Information 6
- Firebox External Dimensions 6
- Minimum Hearth Dimensions 7

Location of Fireplace 7

Clearances and Height Requirements 8

Fireplace Framing 10

Gas Line Installation 12

Canopy and Radiant Face Plates Installation 13

Other Optional Equipment 14
- Forced Air Kit 14
- Brass or Chrome Louvers 14
- Brass or Chrome Trim 14
- Firebrick 14
- Optional Wide Canopy 14

Illustrated Parts Breakdown 15

Using Optional Outside Air Kit 16

Warranty ..... Back Cover

INSTALLER
Please leave these instructions with the appliance.

OWNER
Please retain these instructions for future reference.

IMPORTANT
Read these instructions carefully before installing or trying to operate a vent-free gas heater in this firebox.

WARNING

- **Any change to this heater or its controls can be dangerous.**
- **Improper installation or use of the heater can cause serious injury or death from fire, burns, explosion or carbon monoxide poisoning.**
- **Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns.**
- **Do not use a blower insert, heat exchanger insert or other accessory, not approved for use with this heater where applicable.**

1. Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
2. Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
3. Young children should be carefully supervised when they are in the same room with the apliance.
4. Do not place clothing or other flammable material on or near the appliance.
5. Any safety screen or guard removed for servicing an appliance, must be replaced prior to operating the heater.
6. Installation and repair should be done by a qualified service person.
7. To prevent malfunction and/or sooting, an unvented gas heater should be cleaned before use at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways be kept clean.
8. **CARBON MONOXIDE POISONING:** Early signs of carbon monoxide poisoning are similar to the flu with headaches, dizziness and/or nausea. If you have these signs, obtain fresh air immediately. Have the heater serviced as it may not be operating properly.
9. The installation must conform with local codes or, in the absence of local codes, with the **National Fuel Gas Code, ANSI Z223.l/NFPA54.**
10. This unit complies with ANSI Z21.91.2001 ventless firebox enclosures for gas-fired unvented decorative room heaters.
11. Do not install heater in a bathroom or bedroom.
12. Correct installation of the ceramic fiber logs, proper location of the heater, and annual cleaning are necessary to avoid potential problems with sooting. Sooting, resulting from improper installation or operation, can settle on surfaces outside the fireplace. See log placement instructions for proper installation.
13. Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into fireplace. Do not place a blower inside burn area of firebox. Ceiling fans may create drafts that alter burner flame patterns. Sooting and improper burning will occur.
14. **Caution:** Candles, incense, oil lamps, etc. produce combustion byproducts including soot. Vent-free appliances will not filter or clean soot produced by these types of products. In addition, the smoke and/or aromatics (scents) may be reburnt in the vent-free appliance which can produce odors. It is recommended to minimize the use of candles, incense, etc. while the vent-free appliance is in operation.
15. An unvented gas-fired heater uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. See installation guidelines.

Continued on page 4

Continued from page 3

16. Keep room area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
17. Unvented gas heaters are a supplemental zone heater. They are not intended to be a primary heating appliance.
18. Unvented gas heaters emit moisture into the living area. In most homes of average construction, this does not pose a problem. In houses of extremely tight construction, additional mechanical ventilation is recommended.
19. During manufacturing, fabricating and shipping, various components of this appliance are treated with certain oils, films or bonding agents. These chemicals are not harmful but may produce annoying smoke and smells as they are burned off during the initial operation of the appliance; possibly causing headaches, or eye or lung irritation. This is a normal and temporary occurrence.

    The initial break-in operation should last two to three hours with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in period will be slight and will disappear with continued use.
20. Input ratings are shown in BTU per hour and are for elevations up to 2,000 feet. For elevations above 2,000 feet, input ratings should be reduced 4 percent for each 1,000 feet above sea level. Refer to the National Fuel Gas Code.
21. The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).
22. The appliance must be isolated from the gas supply piping system by closing its equipment shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).
23. Do not use this room heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
24. Never burn solid fuels in a fireplace where a unvented room heater is installed.
25. Always have a fireplace screen in place when the appliance is in operation, and unless other provisions for combustion air are provided, the screen shall have an opening(s) for induction of combustion air.
26. Do not fill spaces around the firebox with insulation or other materials. These spaces must be maintained to prevent the firebox from coming in contact with combustible materials.

www.nficertified.org

We suggest that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as Gas Specialists.

WARNING

Never connect unit to private (non-utility) gas wells. This gas is commonly known as wellhead gas.

WARNING

Do not attempt to burn solid wood fuels, vented gas log sets, or any other combustible in this unvented firebox. Also, do not install a vent-free gas log set in this firebox if the minimum clearance and height requirements of the log set are too large for the firebox.

The BUF400 and BUF500 are vent-free fireboxes and feature a self contained heat-circulating system. This unit also features a 2-in1, flexible-face system that converts the circulating system into a radiant system in seconds.

This installation manual will enable you to obtain a safe, efficient and dependable installation of your vent-free fireplace system.

Do not alter or modify the firebox or its components under any circumstances. Any modification or alteration of the firebox system, including but not limited to the firebox and accessories, may void the warranty, listings and approvals of this system and could result in an unsafe and potentially dangerous installation.

BEFORE YOU START

Carefully inspect the contents for shipping damage. If any parts are missing or damaged, immediately inform the dealer from whom you purchased the appliance. Do not attempt to install any part of the appliance unless you have all the parts in good condition.

MAKE SURE YOU HAVE RECEIVED ALL PARTS

Check your packing list to verify that all listed parts have been received. You should have the following:

1. Vent-Free Gas Firebox
2. Canopy
3. Five (5) sheet metal screws for canopy
4. Installation and Operating Instructions

WHAT YOU WILL NEED FOR INSTALLATION

TOOLS

- Phillips screwdriver
- Hammer
- Saw and/or sabersaw
- Level
- Measuring tape
- Electric drill and bits
- Square
- Piping complying with local codes
- Tee joint
- Pipe wrench
- Pliers
- Pipe sealant approved for use with propane/L.P.G. *(resistant to sulfur compounds)*

BUILDING SUPPLIES

- Framing materials
- Wall finishing materials
- Caulking material *(noncombustible)*
- Fireplace surround materials *(noncombustible)*

Refer to the installation instructions provided with the log sets for items required for log set installation.

NOTICE

Illustrations shown in this manual reflect "typical" installations with nominal dimensions and are for design and framing reference only. Actual installations may vary due to individual design preferences. However, always maintain minimum clearances to combustible materials and do not violate any specific installation requirements.

GENERAL INSTALLATION INFORMATION

In planning the installation for the appliance it is necessary to determine where the unit is to be installed and whether optional accessories are desired. Gas supply piping should also be planned. The following steps represent the normal sequence of installation. Each installation is unique, however, and might require a different sequence.

1. Position firebox prior to framing or into prepared framing.
2. Field wire main power supply to models with fan kit. (Electrical connections should only be performed by an experienced, licensed /certified tradesman). Electrical outlet is needed with fan kit.
3. Plumb gas line. (Gas connections should only be performed by an experienced, licensed/certified tradesman).
4. Install vent-free gas log heater per the instructions provided with the vent-free gas log heater.
5. Complete finish wall material, surround and optional hearth extension to your individual taste.

FIREBOX EXTERNAL DIMENSIONS

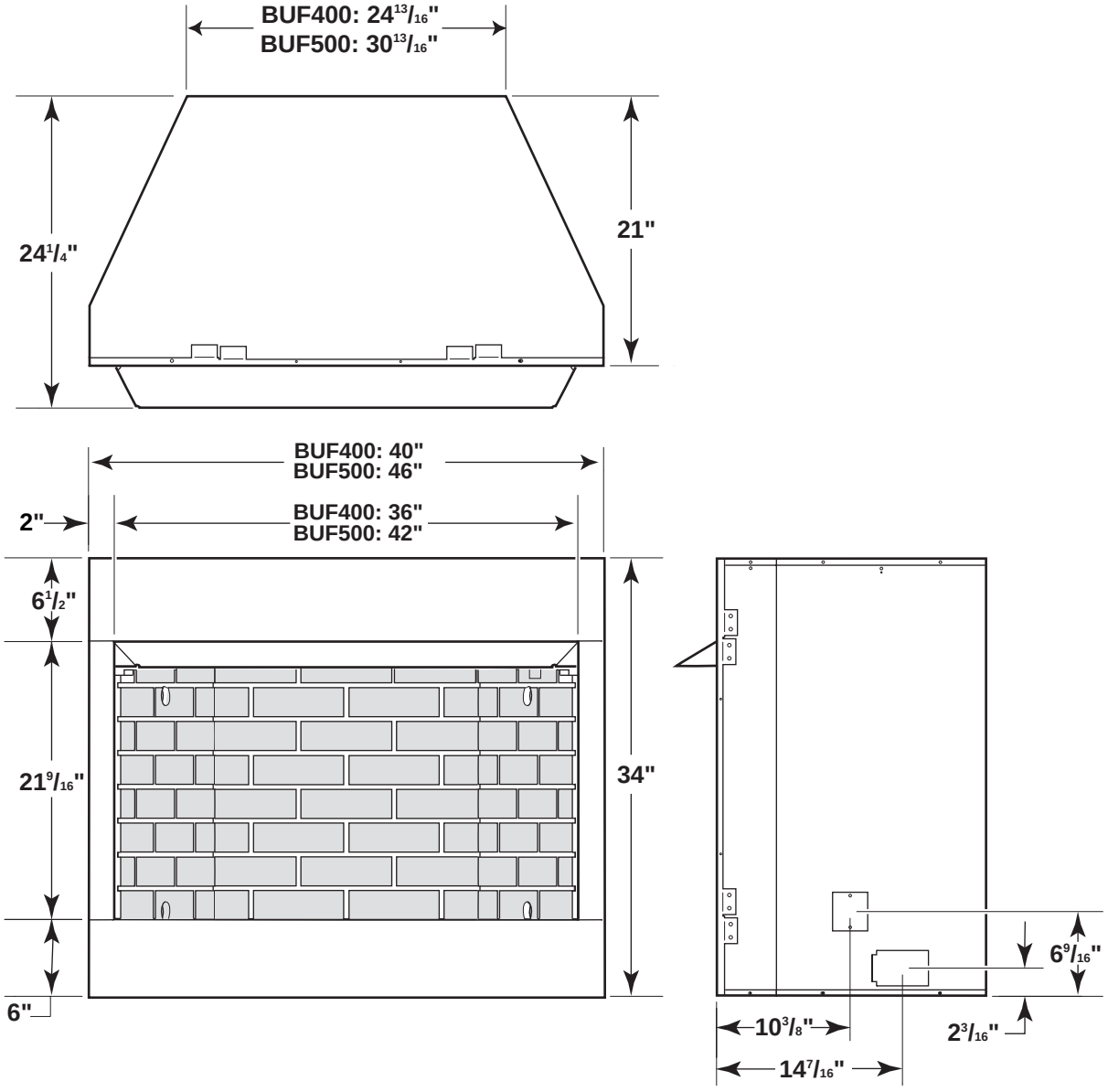


Figure 1 - Firebox Dimensions

MINIMUM HEARTH DIMENSIONS

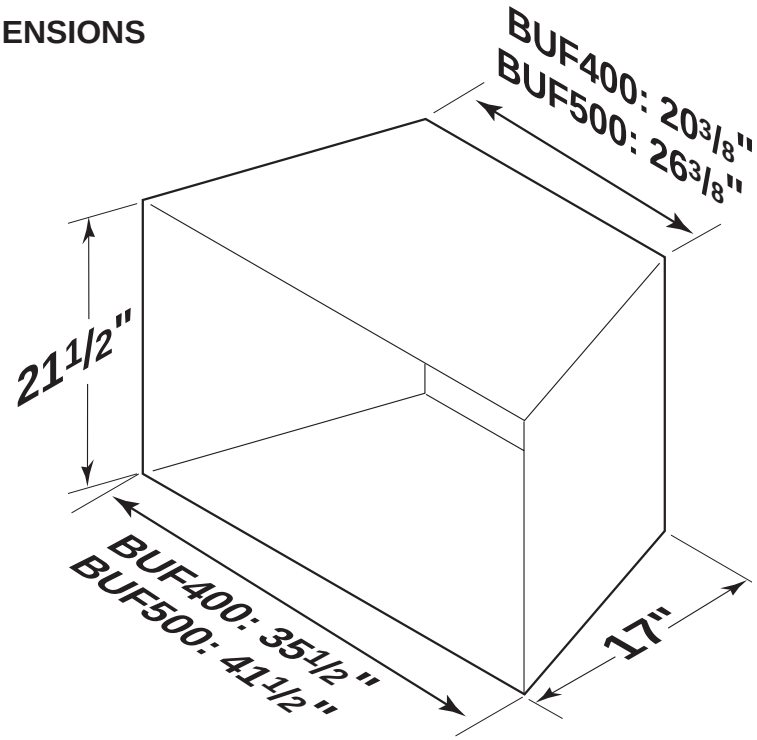


Figure 2 - Minimum Hearth Dimensions

LOCATION OF FIREBOX

Carefully select the best location for installation of your vent-free firebox. The following factors should be taken into consideration:

- Clearance to side wall, ceiling, woodwork and windows. See "Clearances/Height Requirements on page 8. Minimum clearances to combustibles **must be maintained.**
- Location must not be affected by drafts caused by kitchen exhaust fans, ceiling fans, return air registers for forced air furnaces / air conditioners, windows or doors.
- Installation must provide adequate ventilation and combustion air.
- **DO NOT INSTALL THIS FIREBOX IN A BEDROOM OR BATHROOM.**
- Location should be out of high traffic or windy or drafty areas.

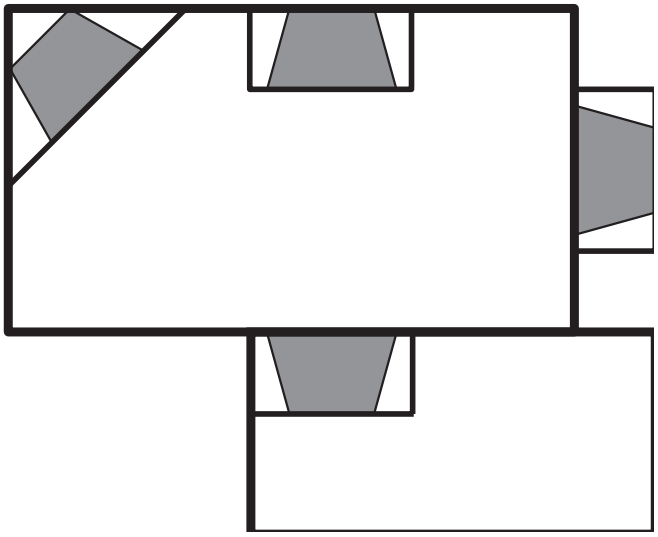


Figure 3 - Location of Firebox

- **DO NOT INSTALL WHERE CURTAINS, FURNITURE, CLOTHING OR OTHER FLAMMABLE OBJECTS ARE LESS THAN 42" FROM FRONT OF HEATER.**
- Never obstruct the front opening of the vent-free firebox or restrict the flow of combustion and ventilation air.
- Minimize modifications to existing construction. Refer to Figure 3 below for location suggestions.
- Do not install in the vicinity where gasoline or other flammable liquids may be stored. The vent-free firebox must be kept clear and free from these combustible materials.

CLEARANCES AND HEIGHT REQUIREMENTS

Ensure that minimum clearances shown in Figures 4 through 7 are maintained. Left and right clearances are determined when facing the front of the firebox.

Follow these instructions carefully to ensure safe installation. Failure to follow these requirements may create a fire hazard.

1. **Sidewall clearances:** The clearance from the inside of the appliance to any combustible wall should not be less than 9". *See Figure 4.*
2. **Ceiling clearance:** The ceiling must be at least 42" from the top of the firebox opening. *See Figure 4.*
3. **Back wall clearnace:** The appliance may be placed against a combustible back wall.

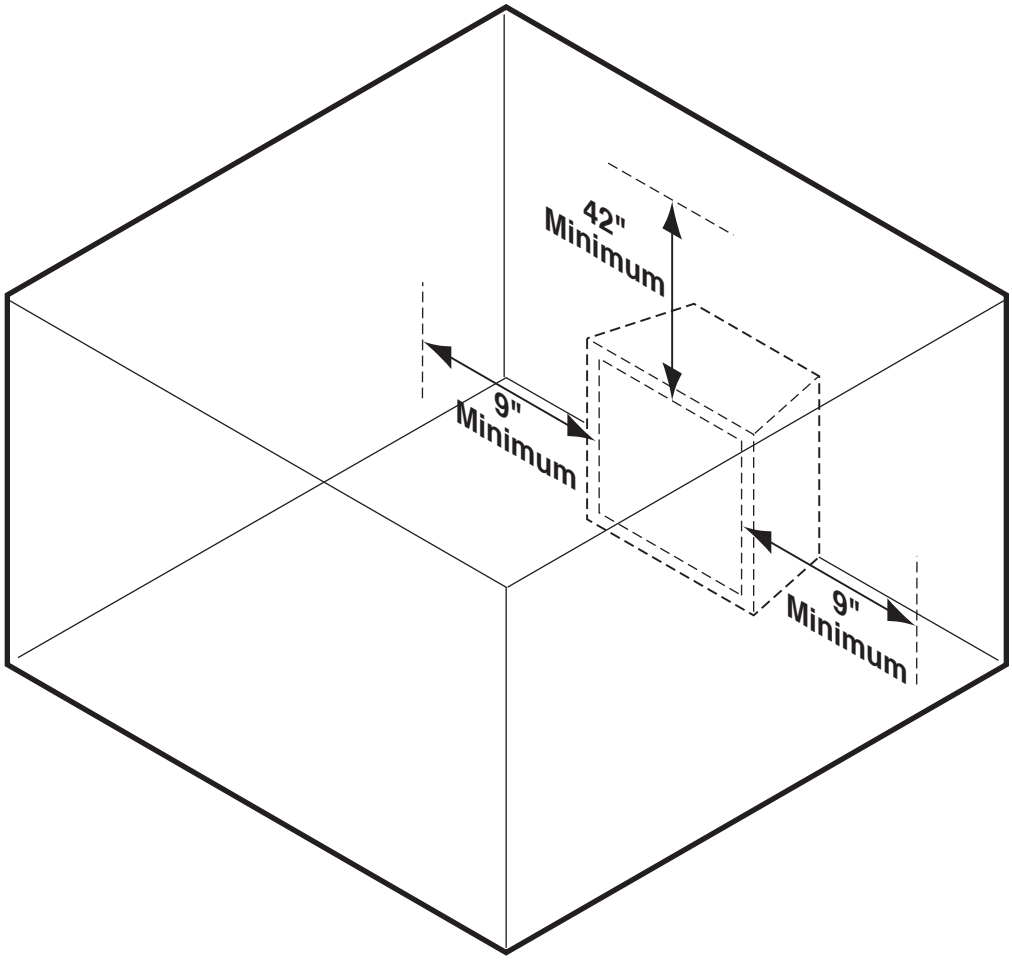


Figure 4 - Clearance and Height Requirements

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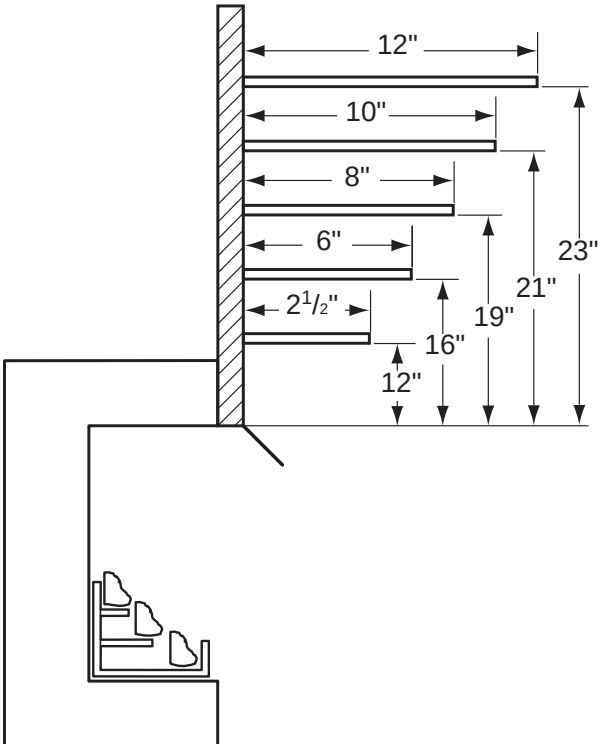


Figure 5 - Mantel Clearances

4. **Mantel clearances:** The canopy supplied with the unit must be installed. If a combustible mantel is installed, it must meet the clearance requirements as shown in *Figure 5*.

5. **Floor clearance:** This inner chamber firebox floor must be installed at least 5" above any combustible flooring material, such as carpeting or asphalt tile, which is closer than 14" to the base of the firebox. *See Figure 6.*

Or

The inner chamber firebox floor may be installed nearer to the floor if a minimum of 14" of noncombustible material such as slate or marble is installed between the base of the firebox and the combustible flooring. *See Figure 7.*

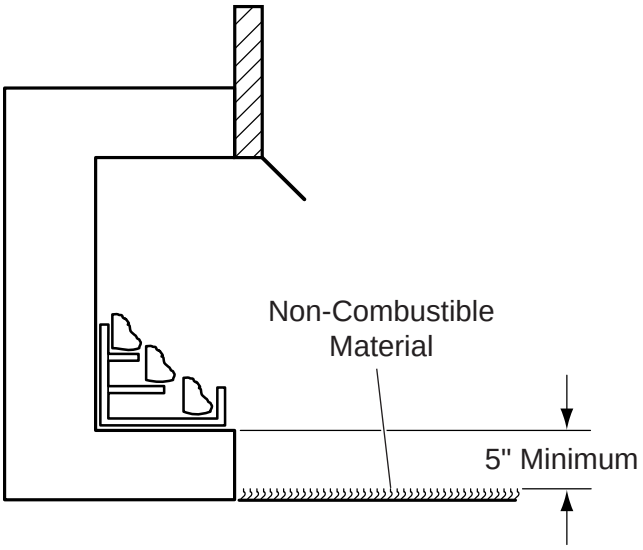


Figure 6 - Minimum Clearance above Combustible Flooring

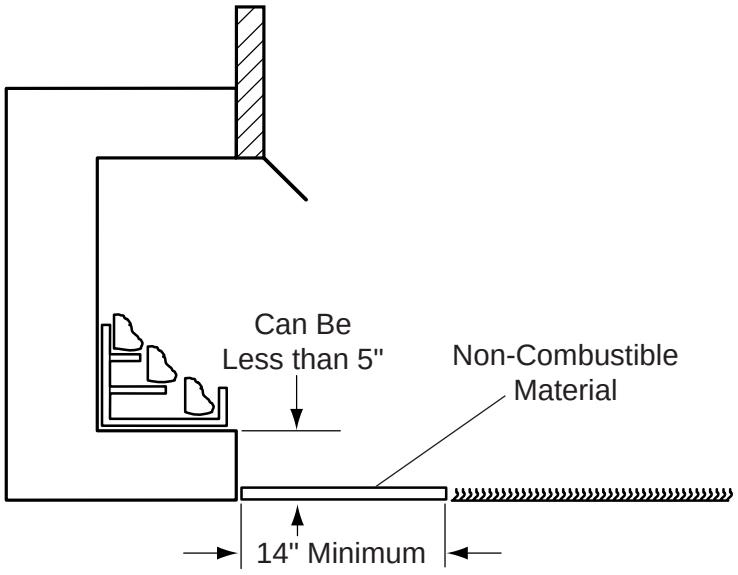


Figure 7 - Minimum Clearance above Combustible Flooring with Non-Combustible Material Installed at Base of Fireplace

FIREPLACE FRAMING

Firebox framing can be built before or after the appliance is set in place. Construct firebox framing following *Figures 8 through 11* and the chart below for your specific installation requirements. *See Figure 1 on Page 6* for firebox dimensions. The framing headers may rest on the top of the firebox standoffs.

The firebox may be installed directly on a combustible floor or raised on a platform of an appropriate height. When the firebox is installed directly on carpeting, tile, or other combustible material, other than wood flooring, the firebox shall be installed on a metal or wood panel extending the full width and depth of the enclosure.

WARNING

Do not fill spaces around firebox with insulation or other materials. This could cause a fire.

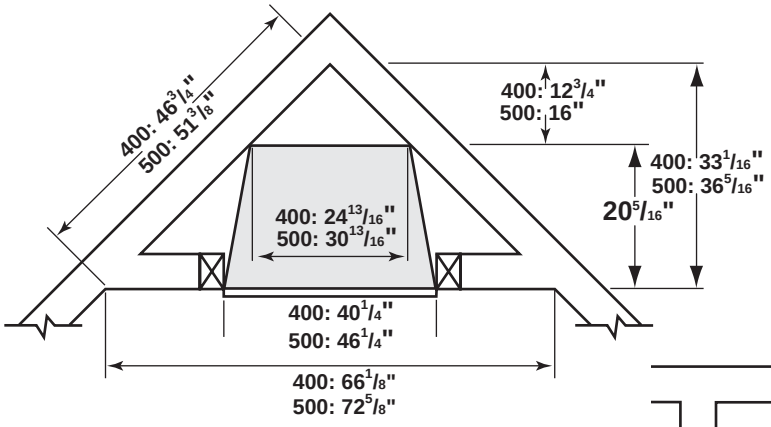


Figure 8 - Corner Installation

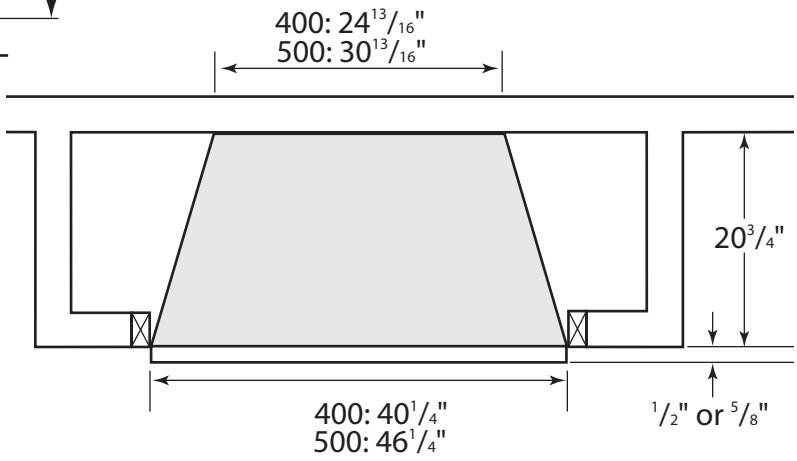


Figure 9 - Inside Chase Installation

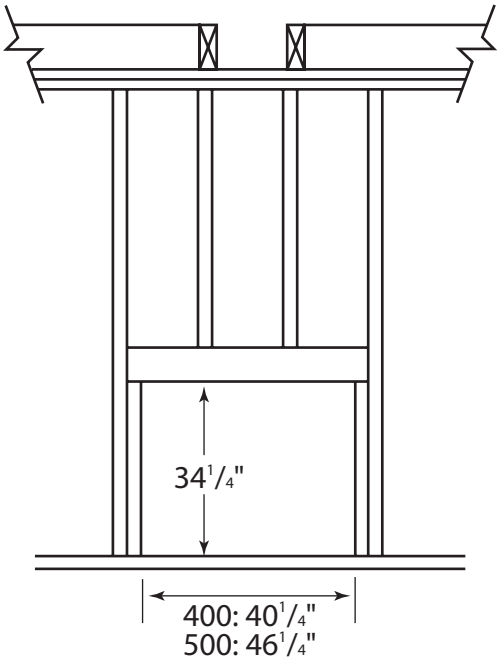


Figure 10 - Stud Location

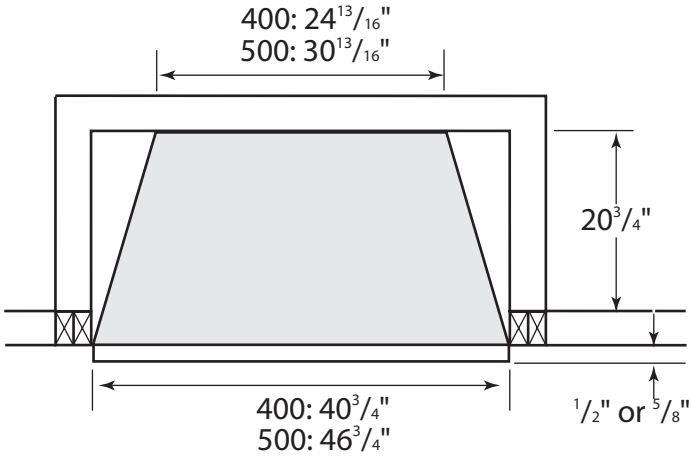


Figure 11 - Recessed Installation

WARNING

The fireplace must be installed giving full consideration to the clearance and height requirements identified in this manual.

1. Bend out the nailing flanges located on each side of the firebox.
2. Slide the firebox into prepared framing or position firebox in its final position and frame later.
3. Level the firebox by checking the top edge of the firebox. Shim if necessary.
4. Anchor firebox to the side framing members using 8d nails or other suitable fasteners. *See Figure 12.*
5. The canopy must be installed for safe operation of the heater. See page 13 for canopy installation details.

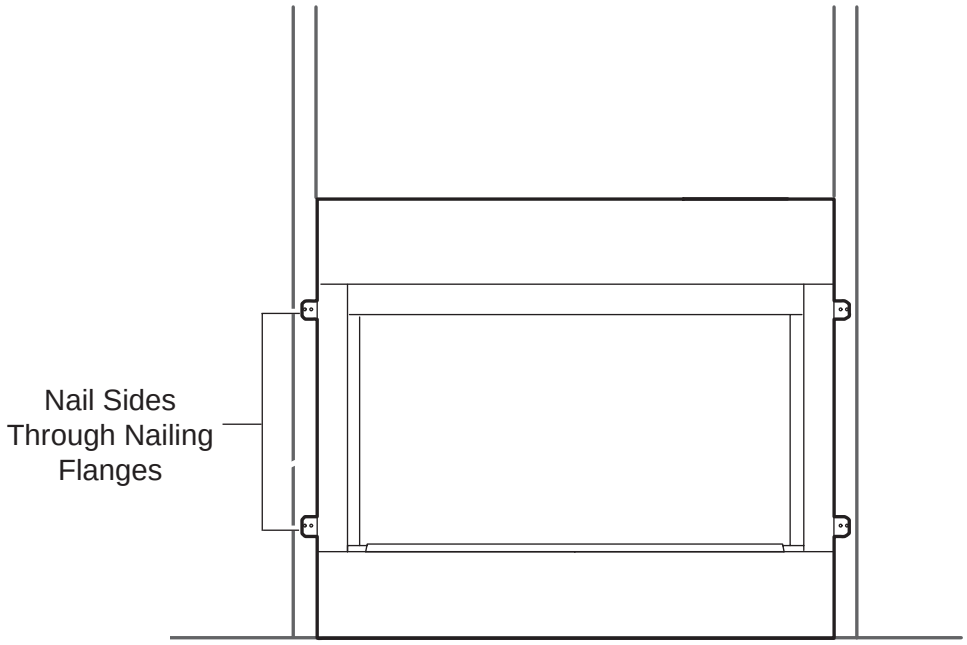


Figure 12 - Location of Nailing Flanges

GAS LINE INSTALLATION

WARNING

Plumbing connections should only be performed by a qualified, licensed plumber. Main gas supply must be off when plumbing gas line to fireplace or performing service.

Consult all local codes. All gas piping must be installed to comply with local codes, or in the absence of local codes, with the latest edition of the National Fuel Gas Code ANSI Z223.1/NFPA54.

Remove the baseplate for ease of gas line installation. Remove three (3) screws along the front edge of the baseplate. Remove four (4) screws which secure the baseplate to the combustion casing (two at rear and one along each side). Replace baseplate prior to connecting gas line to heater. Consult heater installation and operating instructions for correct installation of the heater into the firebox.

The $^1/_2$" gas line may enter either from the left side or right side of the firebox. Gas access holes are provided on both sides of the firebox.

A listed manual shutoff valve must be installed upstream of the appliance. A union tee and plugged $^1/_8$" NPT pressure tapping point should be installed upstream of hte appliance.

IMPORTANT: Install main gas valve (equipment shutoff valve) in an accessible location. The main gas valve is for turning on or shutting off the gas to the fireplace.

A sediment trap may be upstream of the heater to prevent moisture and contaminants from passing through trap to the heater controls and burners. Failure to do so could prevent the heater from operating reliably. Consult applicable codes.

An external regulator must be used on all propane / L.P.G. heaters, in addition to the regulator fitted to the heater, to reduce the supply tank pressure to 13" w.c. (maximum). Any copper tubing used to supply propane / L.P.G. from the tank must be internally tinned.

Note: When connecting propane / L.P.G. vent-free room heaters, you must use pipe sealant resistant to propane / L.P.G.

Important: Hold heater regulator with a wrench to prevent movement when connecting to inlet piping.

Check gas type: The gas supply must be the same as stated on the heater's rating plate. If the gas supply is different, DO NOT INSTALL THE HEATER. Contact your dealer for the correct model.

WARNING

Connecting directly to an unregulated propane / L.P.G. tank can cause an explosion.

After completing connection, test all gas joints from the gas meter to the gas heater regulator for leaks. Using soap and water solution or a gas sniffer. DO NOT USE AN OPEN FLAME.

WARNING

Do not connect directly to natural gas 1/2 PSI or 2 PSI systems. Always make sure natural gas pressure is regulated 10.5 w.c. (maximum before operating the unit).

INSTALLING CANOPY

A canopy is furnished with each firebox and MUST be installed for safe operation. *See Figure 14.*

WARNING

The firebox canopy must not be modified or replaced with a canopy that may be provided with the unvented decorative room heater.

1. Locate three (3) holes at the top of the front frame. *See Figure 13.*
2. Align the canopy with the holes in the top of the frame.
3. Secure canopy to front of frame with screws provided. *See Figure 13.*

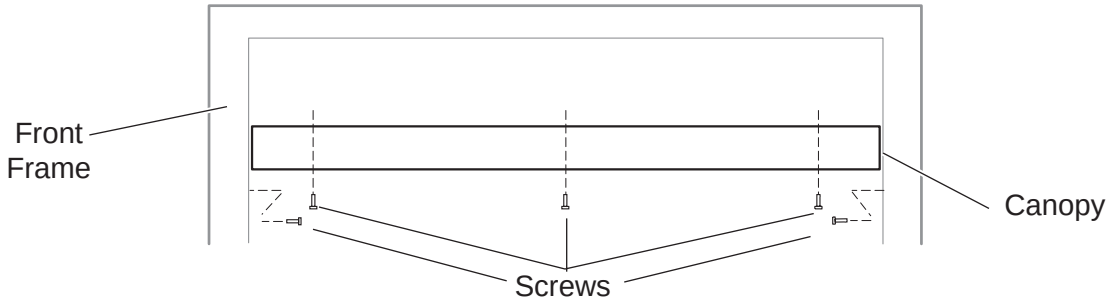


Figure 13 - Installing Canopy

WARNING

Close fireplace screen panel before operating a decorative type unvented room heater.

OPTIONAL EQUIPMENT

FORCED AIR KIT *(FA2A)*

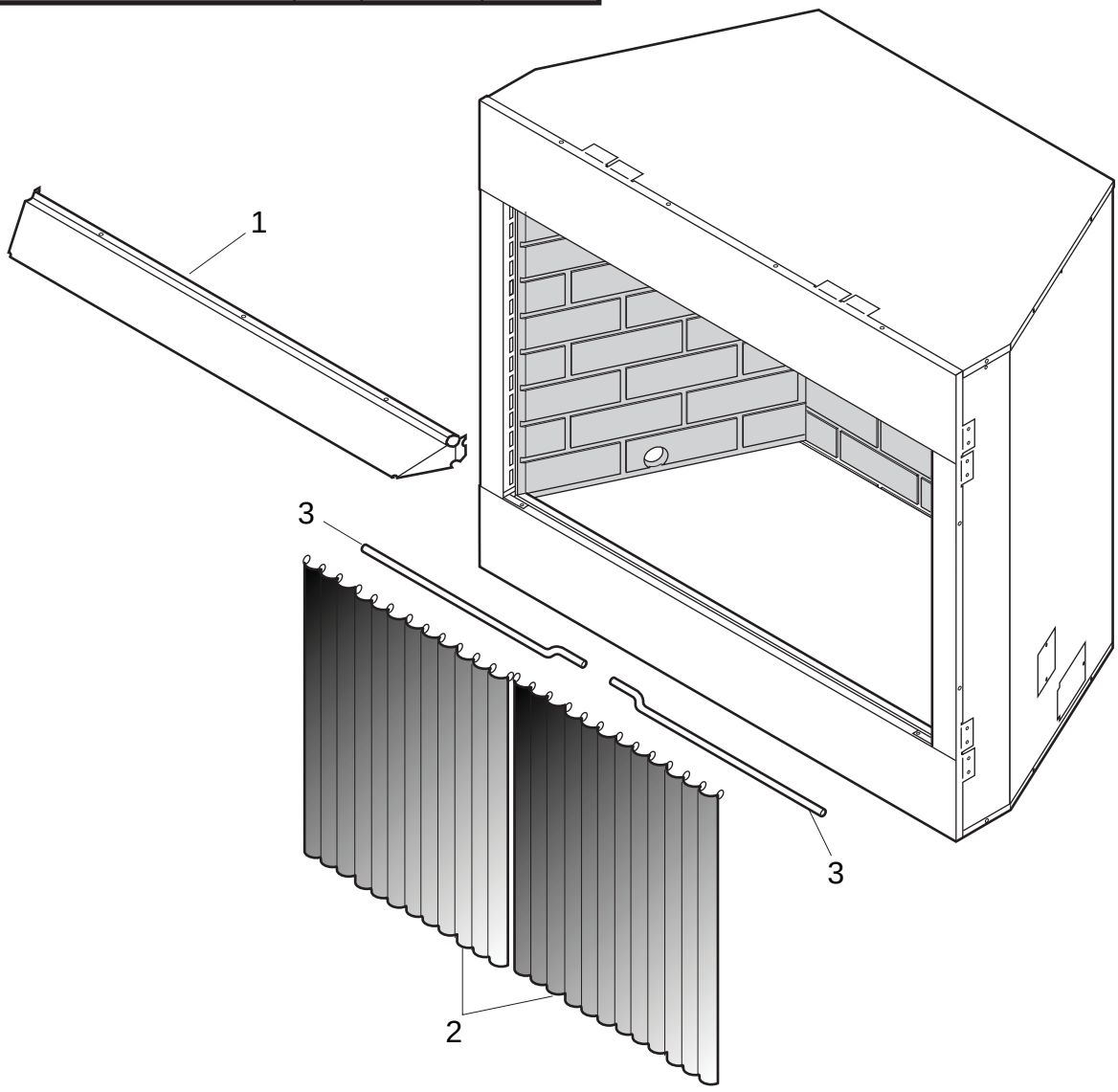
If you are installing the forced air kit, Model FA2A, see the installation instructions provided with the kit for electrical wiring requirements, or the blower installation section. The firebox must be connected to main power supply at time of firebox installation. The blower must be installed prior to the installation of the vent-free heater. The electrical connections must be made before the firebox is framed and enclosed in the finished walls.

WARNING

Electrical connections should only be performed by a qualified, licensed electrician, main power must be off when connecting to main electrical power supply or performing service.

The blower when installed, must be electrically grounded in accordance with local codes or in the absence of local codes, with the National Electrical Code ANSI/NFPA 70.

ITEM	DESCRIPTION	QTY	BUF400	BUF500
1	Canopy	1	26D4568	26D4706
2	Screen Panel	2	26D0131	26D0187
3	Screen Rod	2	26D0132	26D0133
4	Rear Refractory	1	61D0102	61D0107
5	Side Refractory	2	61D0101	61D0101
6	Bottom Refractory	1	61D0100	61D0106
7	Outside Air Kit	1	AK-4	AK-4



FOR USE OF OPTIONAL AK-4 OUTSIDE AIR KIT

COMBUSTION AIR

1. Locate combustion air assembly at an exterior location which is not likely to be accidentally blocked in any manner. Locate assembly a min. of 12" above the snow line to prevent blockage by snow accumulation.
2. Never mount the combustion air inlet assembly in a garage or storage area where combustible fumes such as gasoline might be drawn into the fireplace.
3. Combustion air can be drawn from the crawl space under a house when an adequate supply of air is provided by open ventilation.
4. **CAUTION: Do not take combustion air from attic space or garage space.**
5. Locate air supply inlet at least 3' away from any appliance vent terminal.
6. Avoid extremely long runs and numerous turns in the duct leading from the fireplace to the combustion air assembly. These conditions increase the resistance to the free flow of air through the duct. *See Figures 14 through 17* for methods of installing the outside air for combustion assemblies.

Note: Fireplace model in illustrations may not be representative of your appliance.

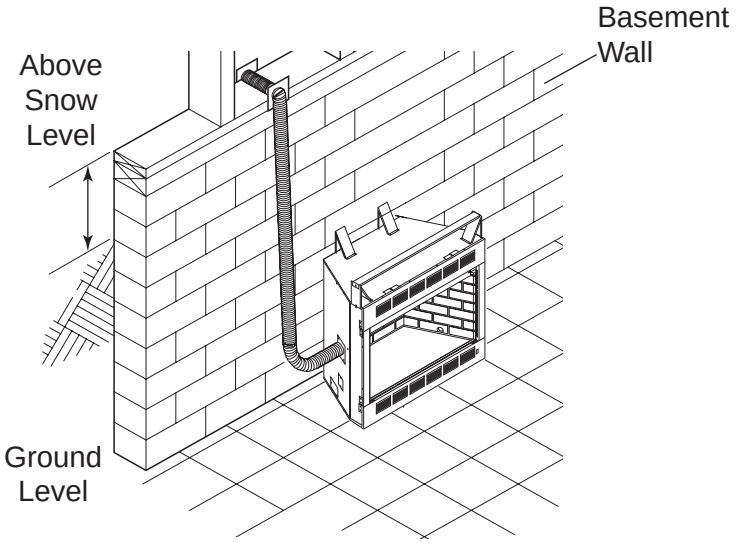


Figure 14 - Basement Installation

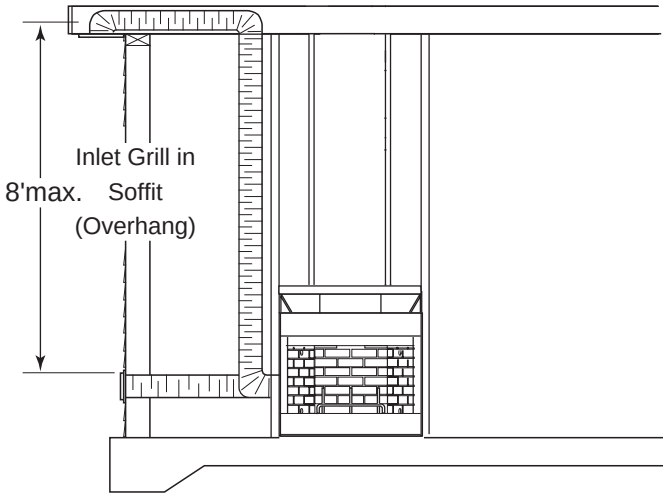


Figure 15 - Concrete Slab Installation (Optional Outside Air Runs)

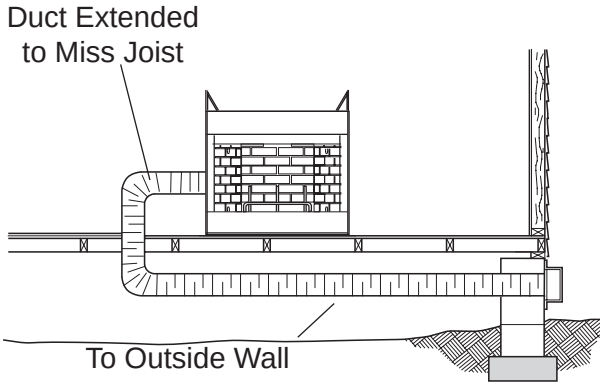


Figure 16 - Installation Above Basement or Crawl Space

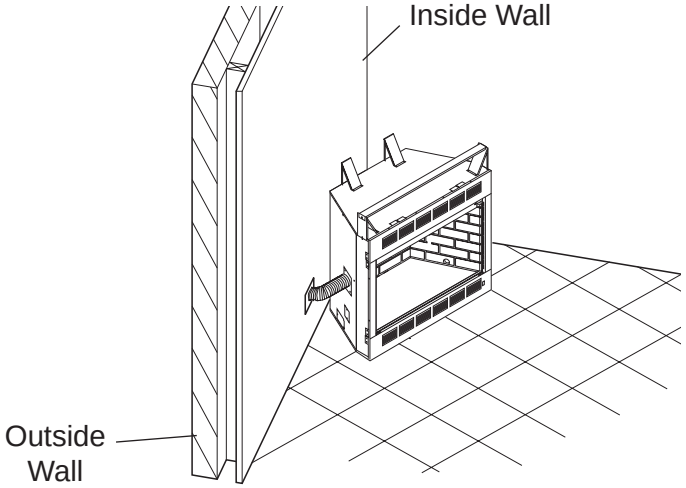


Figure 17 - 45° Corner Installation on Slab Floor

The use of outside air for combustion is optional unless required by building codes. It is only necessary to supply outside combustion air to one side of the fireplace. Use the model AK4 combustion air kit.

MODEL AK-4 COMBUSTION AIR ASSEMBLY

WARNING

DO NOT remove the cover if the outside air will not be connected.

1. Remove the cover plate from the 4" outlet opening location on the left or right outside of the fireplace.
2. Place the insulation ring between the AK-4 starting collar and fireplace wall.
3. Place the starting collar (4") into the hole on the side of fireplace. Fasten it in place with the four sheet metal screws provided. *See Figures 18 and 19.*

Note: The air starting collar extends through the fireplace outer wrap. When the air starting collar is securely attached, it will form a seal against the fireplace wall.

4. Attach outside duct to starting collar with duct clamp or screws. *See Figure 19.*

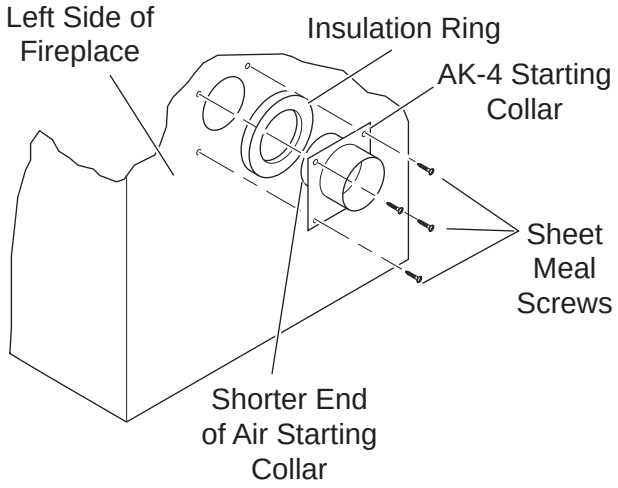


Figure 18 - Attaching Outside Air Starting Collar and Insulation Ring to Left Side of Fireplace

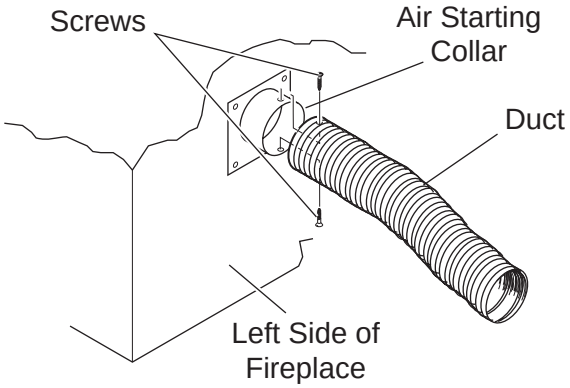


Figure 19 - Attaching Outside Duct to Starting Collar

5. Cut a 6-inch diameter opening for model AK-4 in the outside wall covering where the outside vent is to be located. *See Figure 20.*
6. Select and cut a piece of duct long enough to attach to the fireplace and stick out at least 3" beyond the face of the wall to which the AK-4 inlet air vent will be attached. *See Figure 19.*

WARNING

Use FP-4 U duct for maximum efficiency and safety. Do not use a combustible duct. Always use UL Listed Class 0 or 1 duct material.

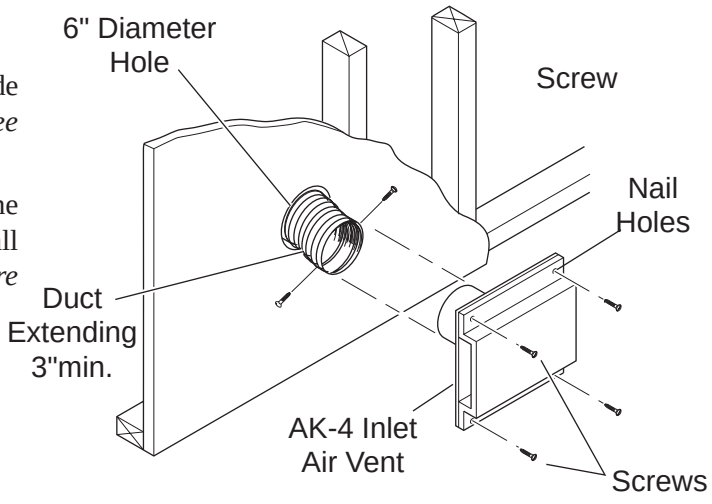


Figure 20 - Combustion Air Assembly for Model No. AK-4

Continued

MODEL AK-4 COMBUSTION AIR ASSEMBLY *(CONTINUED)*

7. If the duct is the insulated type, push the insulation back from one end of the duct approximately 2". *See Figure 21*.
8. Slip the exposed end of the duct over the starting collar on the fireplace.
9. Using the sheet metal screws provided, secure the duct end to the collar attached to the fireplace.
10. Nail or screw the combustion air assembly to the surface of the wall.

Note: If the wall covering is brick or stone, use appropriate masonry fasteners. If necessary, splice the duct. Use a model 403-duct connector to splice duct sections.

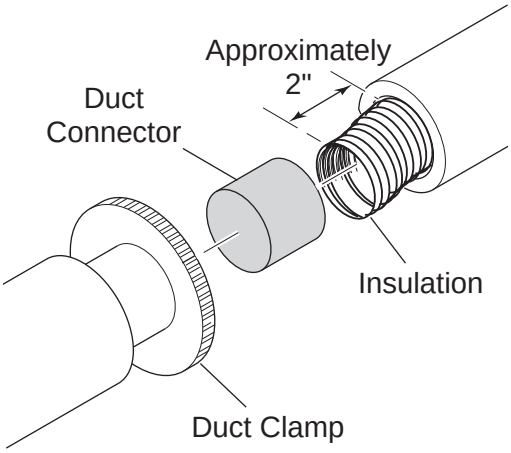


Figure 21 - Installing Duct Connector 403

INSTALLING MODEL 403 DUCT CONNECTOR

1. Push insulation back approximately 2" from the end of each duct.
2. Slip each duct over duct connector until an equal length of connector extends into each duct.
3. Place duck clamp over the end of each duct. Tighten duct clamp down snuggly.
4. Push insulation back into place and over duct clamp.

MONESSEN HEARTH SYSTEMS

LIMITED LIFETIME WARRANTY POLICY

The following components are warranted for life to the original owner, subject of proof of purchase: Firebox, Combustion Chamber, Heat Exchanger, Grate, and Stainless Steel Burners.

FIVE YEAR WARRANTY

The following components are warranted for 5 years to the original owner, subject of proof of purchase: Vent Free Ceramic Fiber Logs, Catalytic Filter and Aluminized Burners.

BASIC WARRANTY

Monessen Hearth Systems (MHS) warrants the components and materials in your gas appliance to be free from manufacturing and material defects for a period of two years from date of installation. After installation, if any of the components manufactured by MHS in the appliance are found to be defective in materials or workmanship, MHS will, at its option, replace or repair the defective components at no charge to the original owner. MHS will also pay for reasonable labor costs incurred in replacing or repairing such components for a period of two years from the date of installation. Any products presented for warranty repair must be accompanied by a dated proof of purchase.

This Limited Lifetime Warranty will be void if the appliance is not installed by a qualified installer in accordance with the installation instructions. The Limited Lifetime Warranty will also be void if the appliance is not operated and maintained according to the operating instructions supplied with the appliance, and does not extend to (1) firebox/burner assembly damage by accident, neglect, misuse, abuse, alteration, negligence of others, including the installation thereof by unqualified installers, (2) the costs of removal, reinstallation or transportation of defective parts on the appliance, or (3) incidental or consequential damage. All service work must be performed by an authorized service representative.

This warranty is expressly in lieu of other warranties, express or implied, including the warranty of merchantability of fitness for purpose and of all other obligations or liabilities. Monessen Hearth Systems, Inc. does not assume for it any other obligations or liability in connection with the sale or use of the appliance. In states that do not allow limitations on how long an implied warranty lasts, or do not allow exclusion of indirect damage, those limitations of exclusions may not apply to you. You may also have additional rights not covered in this Limited Lifetime Warranty.

MHS reserves the right to investigate any and all claims against the Limited Lifetime Warranty and decide upon method of settlement.

For information about this warranty, contact:

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Monessen Hearth Systems
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Paris, Kentucky 40361